

June 30, 2012

General Land Office Resource Management Program Area 1700 N. Congress Avenue, Room 617 Austin, TX 78701-1495

Attn: Ms. Melissa Porter

Re: Boater Waste Education Campaign

GLO Contract No. 11-004-000-4302

Final Report

Dear Ms. Porter:

Enclosed please find the final report for the Boater Waste Education Campaign project. GBF is very excited with the direction this project is heading and we thank you for your continued feedback and encouragement.

Please feel free to call me at (281) 332-3381 ext. 215 with any questions you may have regarding the project. We are currently preparing the final invoice and the appropriate match documentation.

Again, thank you for your support. I look forward to working with you on future projects.

Sincerely,

Charlene Bohanon

Water Quality Outreach Specialist

Charlene Bohanon

Enclosure: Final Report

Boater Waste Education Campaign

GLO Contract # 11-004-000-4302

FINAL REPORT

Submitted: June 30, 2012

Prepared by:



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Prepared for:



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Executive Summary

The Boater Waste Education Campaign (BWEC) addresses the issue of illegal boater waste discharge through targeted outreach and education to boaters. The purpose of the campaign is to decrease the incidence of illegal discharge of boater sewage to the Galveston Bay estuarine system, particularly Clear Lake. Since Clear Lake has the third highest concentration of privately owned marinas in the U.S, educating the public about the proper disposal of boater sewage is critical for the overall health of the ecosystem. The Clear Lake and Galveston Bay communities have shown sincere interest in tackling this environmental issue and have played an instrumental role in the development of the campaign. The work group has successfully developed campaign messages, created marketing materials, and distributed materials in the boating community through a variety of methods (advertisements, pump-out guides, promotional items, presentations, etc.). Involved marina owners and managers have been willing to help with all aspects of the campaign and the boaters reached during the events and exhibits have been very receptive to the campaign messages. The Galveston Bay Foundation (GBF) is extremely pleased with the progress that has been made with the campaign since its inception in 2008 through 2012.

Moving forward, GBF will continue to maintain the campaign and the distribution of the campaign message, but the focus will be less on developing marketing materials and more on engaging boaters in hands-on activities that will motivate behavior change and result in bacteria reductions in Galveston Bay. GBF will continue communicating with marinas, fuel stations, and local governments about increasing the number of pump-outs in the Galveston Bay region, including Clear Lake. GBF hopes to also see more participation from enforcement agencies in issuing citations for illegal sewage discharges. Finally, the campaign will work with partners to look at existing environmental data in order to try and quantify the level at which boater waste contributes to overall bacteria impairments in Galveston Bay. Volunteer water monitors at marinas will augment this professional data through participation in GBF's monitoring group. There is still a long way to go regarding attitude and behavior change toward boater waste issues, but GBF is hopeful that the BWEC's new approach will drive this change forward.

Project Description

Water and sediments are degraded in and around marinas from boat sewage and introduction of dockside wastes from non-point sources. It has been demonstrated that the combination of poor circulation and discharge from boaters and boat maintenance operations create serious localized water quality problems. In spite of having placed several pump-outs throughout the Clear Lake area, the largest concentration of marinas in Texas, many boaters continue to discharge raw sewage from marine heads directly in the waters of Clear Lake and Galveston Bay, due in large part to a lack of knowledge and enforcement of the "No Discharge" rule in Clear Lake.

GBF believes that outreach and education efforts are effective tools in decreasing discharges and improving water quality. In 2008, the BWEC was launched to address illegal discharges through targeted outreach and education to boaters. This project is comprised of an education campaign targeted at the Clear Lake, TX boating/marina community that is also applicable to Galveston Bay users as a whole. The purpose of the campaign is to decrease the incidences of illegal

discharge of boater sewage waste in the Galveston Bay Estuary, particularly Clear Lake that has the third highest concentration of privately owned marinas in the U.S.

The project involves the development of social marketing messages suitable for, but not limited to, personal communications via presentations and exhibits, print, billboard, and Internet use. The Galveston Bay Foundation focuses on communicating the message directly to boaters and marinas. This has been achieved by contacting marinas to arrange special events, presentations, and/or exhibits where boaters will be exposed to the campaign message. The campaign emphasizes 1) environmental harm caused by raw sewage and 2) how boaters can properly dispose of their waste. As part of the initiative, boaters and marinas have been encouraged to join the Clean Texas Marina and Clean Boater Programs. Marinas have also been encouraged to seek funding through the Clean Vessel Act Program to construct, renovate, or replace pump-out stations. Outreach programs have proved to be effective in the past, but there is a need for a strong campaign in the Clear Lake area to reach new boaters and reawaken awareness of the issue. GBF has directed the development and distribution of the message with the input of a workgroup comprised of stakeholders representing 15 different boating and environmental groups, as well as members of the general public.

CMP funding has played a key role in the distribution of the BWEC messages, by covering costs associated with marketing and advertisement. This grant also supported salary and supplies expenditures necessary to execute the project. The BWEC has been well received in the Clear Lake/Galveston Bay community and GBF plans to continue carrying out this project indefinitely.

Task 1: Maintain active working group

A working group continued to guide BWEC activities, and consisted of representatives from the Galveston Bay Estuary Program, Clean Marina Program, Clear Lake Marina Association, Texas Parks and Wildlife, and other relevant, bay-area groups. The working group was originally formed under a Galveston Bay Estuary Program grant beginning in 2007. The committee members were solicited in the fall of 2007; the original invitation sent to bay area entities predated the beginning of this grant cycle. The active working group was formed to develop and execute the campaign. The current workgroup consists of several original members, but GBF continually recruits new members in order to keep the BWEC ideas fresh. Participation in the workgroup is open to any interested parties. **Table 1** includes a list of the participating individuals. The meeting schedule is included in **Table 2**.

The working group members contributed to the project in different ways. The Clear Lake Marina Association provides the business perspective to BWEC efforts and acts as an effective means to disseminate information and build networks in the local boating community. The Clean Texas Marina Program offers Clean Boating Tip cards, Clean Boater Pledge cards, Scoop on Poop brochures showing pump-out locations throughout Texas, as well as technical information on the Clean Marina Program. Both of these organizations are active in the Marina Association of Texas and aid in getting the BWEC efforts publicized state-wide. Redfish Island Marine and

Maritime Sanitation are the two mobile pump-out companies currently in operation in Clear Lake and Galveston Bay. They offer promotional items to be used in education packets (coupons for pump-out discounts) and in-kind donations for marina outreach events, as well as technical information on pump-out equipment and assistance to marinas interested in applying for Clean Vessel Act grants. Texas Parks and Wildlife Department, Texas Commission on Environmental Quality, and Galveston Bay Estuary Program assist the workgroup with questions relating to environmental regulations, access to data, and aid in the workgroup's efforts to get Galveston Bay designated as a No Discharge Zone. Several members of the workgroup are from the general public, having either retired from working in the boating industry and/or are current recreational boaters. Their knowledge and experience in the community is invaluable to the BWEC efforts.

One of the most valuable results of continuing this workgroup has been the fact that GBF has a group of committed stakeholders from the boating industry that are always available to bounce ideas off of and to give feedback on BWEC efforts. The workgroup has assisted with evolving the BWEC into what it is today, by moving the campaign from a marketing and advertising focus to an on-the-ground, hands-on focus. GBF looks forward to continuing to carry out this shift in the campaign with their help.

Table 1. Boater Waste Education Campaign Workgroup

Last	First	Organization
Bartsch	Trey	Galveston Bay Foundation
Bohanon	Charlene	Galveston Bay Foundation
Broach	Linda	Texas Commission on Environmental Quality
Calkins	Katie	Redfish Island Marine
Capuano Day	Candy	Houston Safe Boating Council
Cunningham	Kevin	Texas Parks and Wildlife Department
Derrick	Cassandra	TCEQ Clean Water Sticker Program
Fitz Simmons-Evans	Lori	Galveston County Health District
Guillen	George	University of Houston – Clear Lake
Hall	Lynda	Lakewood Yacht Club
Heck	Keisha	Redfish Island Marine
Hollin	Dewayne	Clean Texas Marina, TAMU
Johnston	Steven	Galveston Bay Estuary Program
Jones	Scott	Galveston Bay Foundation
Kizer	Kris	General Public
Kropf	Philip	Texas Mariners Cruising Association - Past Commodore
McCauley	Ericka	Galveston Bay Estuary Program

McDowell	Angela	Galveston County Health District
McVicker	Autie	Maritime Sanitation, Inc.
McVicker	Trace	Maritime Sanitation, Inc.
Mintzer	Julie	Galveston Bay Foundation
Morris	Chip	TCEQ TMDL Project Manager
Paige	Helen	Marina Bay Harbor
Powers	Rachel	Houston Galveston Area Council
Schultz	Ronnie	Galveston County Health District
Stokes	Bob	Galveston Bay Foundation
Tuma	Scott	City of League City
Williams	Paul	Maritime Sanitation, Inc.
Wright	Jean	Houston-Galveston Area Council

Table 2. Workgroup meeting schedule

CMP Cycle	Date	Location	Time	Attendance
14/15	1/13/11	GBF Office	5:30pm	11
15	9/14/11	GBF Office	2:00pm	7
15/16	10/12/11	Coffee Oasis	2:00pm	10
15/16	11/9/11	GBF Office	2:00pm	8
15/16	12/7/11	GBF Office	2:00pm	5
15/16	1/18/12	Armand Bayou Nature Center	5:30pm	8
15/16	5/2/12	GBF Office	2:00pm	8
15/16	6/6/12	GBF Office	2:00pm	11

Task 2. Develop marketing and outreach materials

Previously developed materials for the BWEC served as the basis for printed items developed during this project period. The *Pump Don't Dump* logo (**Figure A**) and blue/orange color scheme were carried over in order to keep the same brand image for the campaign. A new trifold display was designed for use at education booths that communicates the main goals of the BWEC and GBF's mission (**Figure B**). A pump-out guide specific to Galveston Bay and Clear Lake was researched and developed by GBF (**Figure C**). This involved communicating with the workgroup to come up with a list of marinas that were thought to have a pump-out facility, calling each facility to find out if it was functioning properly and if it is for public or private use,

finding the GPS location and correct phone number, designing a map that is easy to read, and writing educational text to communicate the BWEC message. GBF worked with Minuteman Press to finalize the graphic design work and for printing. The guides were printed on glossy, high quality paper and waterproof paper since these are intended to be kept on a boat for repeated use. A QR code was printed on the back that directs users to the BWEC webpage. This allows users to always be able to directly access the most current pump-out facility information as it inevitably changes over time.



Figure A. Campaign logo



Figure B. Tri-fold display pictured at the Houston Boat Show



Other Options

Dockside pump-out service: Maritime Sanitation

Use provided shore-side restroom facilities

Use onboard porta-potties



Visit our website for more information and updates to this Pump-Out Guide





Galveston Bay Pump-Out Guide

Enjoy a Healthy Bay!







Keep Our Waters Clean!

Untreated boater sewage may NEVER

be discharged into Texas waters within 3 miles of the Gulf Coast. It is **illegal** to discharge untreated waste into Galveston Bay. Clear Lake is a federally-designated 'No Discharge Zone.' It is illegal to discharge both treated AND untreated sewage into Clear Lake. In order to properly dispose of boater waste, you must use an approved pump-out device, station, or service.

Galveston Bay Pump-Out Guide

3. Blue Dolphin Marina (Private) 8. Marina Del Sol 13. Galveston Yacht Club (281) 474-4450 | 29°33′29″N 95°01′40″W (281) 334-3909 | 29°33′08″N 95°03′12″W (409) 762-9689 | 29°19′05″N 94°46′41″W 4. Seabrook Shipyard (Private) 9. South Shore Harbour Marina (281) 474-2586 | 29°33'08"N 95°01'31"W (281) 334-0515 | 29°32'43"N 95°04'03"W 5. Portofino Harbour 10. The Wharf Marina (Private) (281) 334-6007 | 29"32'54"N 95"01'30"W (281) 334-5976 | 29"32'12"N 95"04'36"W

1. Endeavour Marina (Private) (832) 864-4000 | 29°33'37"N 95°02'33"W (281) 334-3811 | 29°32'37"N 95°02'10"W

2. Lakewood Yacht Club 7. Waterford Harbor Yacht Club 12. Harborwalk Marina (281) 474-4876 | 29°33'27"N 95°01'49"w (281) 334-4400 | 29°32'58"N 95°02'33"w (409) 935-3737 | 29°17'42"N 94°58'03"W



Figure C. Galveston Bay pump-out guide

A revised coaster was created for distribution at waterfront restaurants around Clear Lake and Galveston Bay since they were enthusiastically received during the last cycle of the BWEC (**Figure D**). One side of the coaster remained the same and includes the *Pump Don't Dump* logo, educational message, and the GBF website and funder logos. The other side was redesigned to draw attention with a photo puzzle and encourage the user to visit the BWEC campaign webpage to look up the answer (Keep Our Water

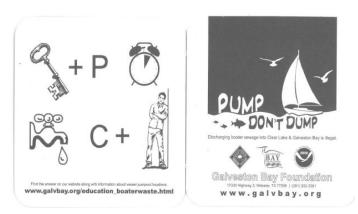


Figure D. Revised coaster design

Clean) and check out the information on boater waste issues.



Figure E. Education packet

GBF frequently receives requests from marinas and boat shows for information to include in their tenant or exhibitor packets. The workgroup decided that putting together BWEC packets would be the best way to distribute multiple items and get the campaign message out to the largest audience (**Figure E**). The packets included the BWEC Pump-Out Guide, How-To-Pump Out DVD, BWEC survey and coupons for 10% off a mobile pump-out service from Maritime Sanitation and Redfish Island Marine, and 10% off marine sanitation supplies at Boater Resale Shop, Texas Sea Grant's Clean Boating Tip card, Clean Boater Pledge card, and Scoop On Poop pump-out guide for all Texas waterbodies.

GBF worked with Image Resources to design a new BWEC video (**Figure F**) for distribution to T.V. stations, for use on GBF's website, and for display on GBF's interactive kiosk. The video can be viewed at www.galvbay.org/education_boaterwaste.html. The workgroup gave GBF positive feedback on this video since it is short, to-the-point, and carries a positive message.

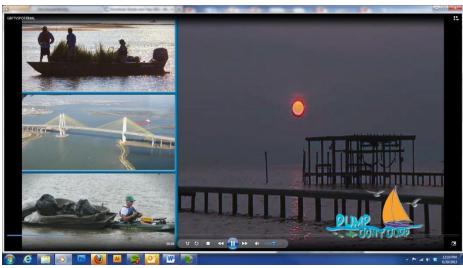


Figure F. BWEC video message to boaters

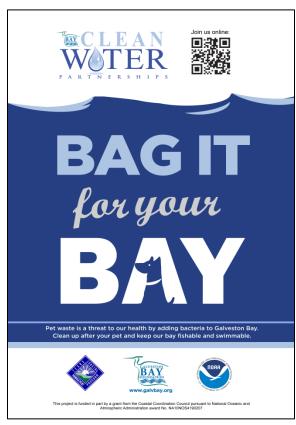


Figure G. Pet waste station educational sign

The workgroup has wanted to see pet waste stations installed at marinas as part of BWEC activities due to the fact that increased numbers of boaters are bringing their dogs onboard and around marinas. GBF's new Marketing Coordinator designed the educational sign (**Figure G**) and the posts and bag dispensers were ordered from Zero Waste USA, Inc.

In terms of advertisements, GBF wrote Facebook posts and articles to advertise BWEC campaign messages, as well as to share campaign work such as education booths, presentations, workshops, and marina partnership activities with GBF followers and supporters (see Task 3 section for examples). A revised BWEC ad was designed by GBF's Marketing Coordinator to be printed in select paid spaces and distributed for use as in-kind donated ad space (**Figure H**).

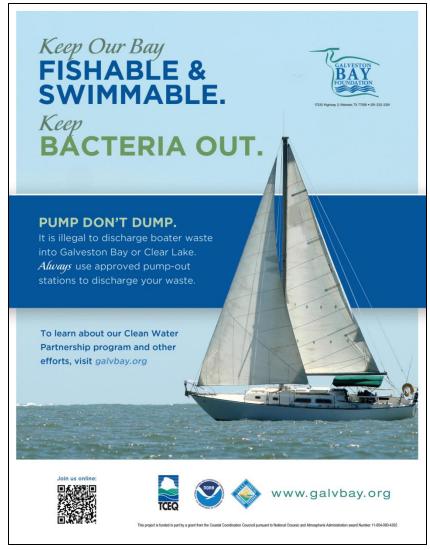


Figure I. Revised BWEC advertisement



Figure H. Clean Water Partnership logo (TCEQ funded, used in BWEC)

As the campaign moved toward spending more time face-to-face with the boating community and forming partnerships with marinas, the Clean Water Partnership logo was developed with funds from TCEQ for use on any materials for partner organizations (Figure I). This logo serves to set partnership marinas apart from other marinas by showing their outstanding commitment to the BWEC. GBF decided to put marinas under the umbrella of Clean Water Partnerships because it was brought to our attention that boaters were feeling singled out when it came to the bacteria problems in the bay, when in fact this whole time GBF has also been addressing land-based bacteria sources. By including all of our water quality related partner organizations under this label and educating them about the other bacteria sources that are being addressed, the hope is that the BWEC audience will understand that while there are many pieces to the puzzle, each person needs to do their part to make improvements – including boater waste issues.

Promotional items were designed and ordered by GBF's Marketing Coordinator to be used as partnership incentives and campaign advertisements, as well as functional items for carrying out BWEC campaign activities (Figure J). The koozies remain a staple item in the campaign due to their effectiveness for drawing audiences in to listen to the BWEC message at education booths, presentations, and workshops. The t-shirts are the official volunteer uniform for boaters participating in volunteer activities through their marina partnership. Volunteers have been given the title "Bay Ambassadors" because it creates a sense of ownership of the bay that GBF wants to foster through the partnerships. The canvas Dockwalker tote bags will be given to volunteers once they are trained and have signed a commitment form for the program. These bags will be used for carrying the supplies they need to facilitate the Dockwalker program, such as surveys, pens, clipboards, and Clean Boater Kits.



Figure J. Promotional items

Additionally, PowerPoint presentations and hands-on activities were developed for various audiences such as the Gulf Coast Yacht Brokers Association, Houston Safe Boating Council's W.A.D.E. summer program, the Galveston County Board of Health, GBF's Bay Day event, the Dockwalker program, and Marina Del Sol's partnership launch event.

Task 3. Develop outreach schedule and distribution plan

The workgroup routinely discussed ways to promote the message of the BWEC. GBF contacted marinas and popular boating events (i.e., Houston Boat Show) to schedule outreach presentations and booth displays, and to offer printed materials for inclusion in tenant packets and event goodie bags. **Table 3** shows the list of marinas that were contacted during this grant cycle, **Table 4** shows the yacht brokers that were contacted, and **Table 5** shows the quantity of printed materials ordered and the distribution locations thus far.

Table 3. Marinas contacted about the BWEC

N/I	wina	Nome	L and	Lagation	
VIZ	arına	Name	ana	Location	ı

	I	T	_ 1	
.	lear		ake	

Constellation Point and			
Marina	451 Constellation	League City	(281) 334-2527
Bal Harbor Marina	123 Lakeside Lane	Houston	(281) 333-5168
Blue Dolphin Yachting			
Center, Inc.	P.O. Box 123	Seabrook	(281) 474-4450
Clear Lake Marine Center,			
Inc.	P.O. Box 716	Seabrook	(281) 326-4426
Endeavour Marina	3101 NASA Parkway	Seabrook	(832) 864-4000
Kemah Boardwalk Marina	555 Bradford St.	Kemah	(281) 334-2284
Lakeside Yachting Center,			
Inc.	2511- B Nasa Rd. 1, Ste. 101	Seabrook	(281) 326-5547
Lakewood Yacht Club			
(Private)	2425 Nasa Parkway	Seabrook	(281) 474-2511
Legend Point	1300 Marina Bay Drive	Clear Lake Shores	(281) 334-3811
Marina Bay Harbor Yacht			
Club	P.O. Box 478	Kemah	(281) 535-2222
Marina Del Sol	1203 Twin Oaks Blvd.	Kemah	(281) 334-3909
Nassau Bay Homes and			
Marina Assoc., Inc.	1120 Nasa Pkwy, Ste. 109	Nassau Bay	(281) 333-2570
Portofino Harbour	One Portofino Plaza	Clear Lake Shores	(281) 334-6007
Seabrook Marina Inc.	1900 Shipyard Dr.	Seabrook	(281) 474-2586
South Shore Harbour	2551 South Shore Blvd., Ste B	League City	(281) 334-0515
Waterford Harbor Marina	800 Mariners Drive	Kemah	(281) 334-4400
Watergate Yachting Center	1500 Marina Bay Drive	Clear Lake Shores	(281) 334-1511
Wharf at Clear Lake			
(WSMA)	P.O. Box 1208	League City	(281) 334-5976

Galveston Bay

Bayland Marina	2651 S. Highway 146	Baytown	(281) 422-8900
Boudreaux's on the Bayou	6310 Herds Lane	Galveston	(409) 744-2111
Eagle Point Fishing Camp,			
Inc.	Route 1 Box 1718	San Leon	(281) 339-1131
Galveston Yacht Club	715 North Holiday Dr.	Galveston	(409) 762-9689

Harborwalk Marina	P.O. Box 2328	Hitchcock	(409) 935-3737
Houston Yacht Club	3260 Miramar Drive	Shoreacres	(281) 471-1255
Payco, Inc.	501 Blume Dr.	Galveston	(409) 744-7428
Pelican Rest Marina	7819 Broadway	Galveston	(409) 744-2618
Waterman's Harbor, Inc	16426 Clearcrest	Houston	(281) 339-1416

Table 4. Yacht brokers contacted about the BWEC

Yacht Broker	Location	Address	Phone Number
A&M Yacht Sales	Seabrook	1800 Seabrook Shipyards	281-291-7950
Set Americas	Webster	711 West Bay Area Boulevard	281-316-5100
The Yacht Service Co.	Clear Lake	3000 Nasa Parkway	281-333-9712
Lauderdale Yacht Sales	League City	2551 South Shore Harbour Blvd Suite B	281-535-0900
Galati Yacht Sales	Seabrook	1902 Seabrook Shipyards	281-474-1470
United Yacht Sales	Kemah	1115 Marina Bay Drive	281-538-6231
Sea Lake Yacht Sales	Kemah	1500 FM 2094 rd	281-334-1993
Jay Bettis & Co Yacht Sales	Seabrook	2509 Nasa Parkway	281-326-3333
American Yacht Sales	Dickinson	3304 N Wyoming Ave	281-334-6531
Flagship Yachts	Seabrook	2511 Nasa Parkwat #107	281-532-3200
Boatshedtexas.Com	Kemah	1500 Marina Bay Dr #1441	281-538-1632
Watergate Yachting Center	Kemah	1500 Marina Bay Drive	281-334-1511
Nautic Yacht Sales	Kemah	585 Bradford St	281-334-2628
Grand Banks Yachts	League City	3027 FM road 2094	281-335-3993
J M Yachts	Clear Lake	1500 Marina Bay Dr #1570	281-538-0761
Texas Marine & Brokerage Inc	Seabrook	2700 Nasa Parkway	281-326-9595
HSH Yacht Sales	Kemah	1500 Marina Bay Drive #132b	832-864-2030
Lone Star Yachts Sales	Kemah	1500 Marina Bay Drive #3380	281-334-3500
Josh at Sea Lake Yachts	Kemah	1500 Marina Bay Drive Pier 23	281-334-0485
Texas Sport Fishing Yachts Sales	Seabrook	802 Hardesty Ave	281-474-9600
Discovery Yachts Inc	Seabrook	2101 Todville Road	281-291-9109
Texas Coast Yachts	Kemah	1500 Marina Bay Drive Suite 122-A	281-957-9046
Gibson Weaver Yacht Sales	Seabrook	2511B Nasa Parkway	281-326-1574
Kent Little @ Little Yacht Sales	Kemah	Waterford Harbor, 800 Mariners Drive	713-817-7216
Third Coast Marine	Clear Lake	1500 Marina Bay Drive	323-835-3877
Southern Cross Yacht Sales	Kemah	585 Bradford Ave	281-334-7411
Seawinds International Inc	Kemah	703 Bay Ave	281-334-5296
Ron's Yacht Brokerage	Seabrook	Texas 146 & Shipyard Drive	281-474-5444
Marine Max Inc.	Seabrook	3001 Nasa Parkway	281-326-4224

Third Coast Marine & Pro-shop	Seabrook	1900 Shipyard Drive	281-832-9415
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Table 5. BWEC printed materials and distribution locations

Table 5. BWEC printed materials		ocurons -
Item	Number Printed	Distribution Location
Pump-out guides	4500	Included in education packets (see below) and all education booths listed in Table 6
ı C		Boondoggle's Pub, Boudreaux's on the Bayou, Gilhooey's, Outriggers, Topwater Grill, Turtle Club, Noah's Ark Bar & Grill, Tommy's Restaurant and Oyster Bar, Stingaree Restaurant,
Coasters Education Packets	3,500	Bubba's Bar and Grill, Molly's Pub Gulf Coast Yacht Brokers Association members, Christmas Boat Lane Parade on Clear Lake captain goodie bags, Blue Dolphin Yachting Center, Marina Del Sol, Pelican Rest Marina, Redfish Island Marine, Watergate Yachting Center, Waterford Harbor Marina, South Shore Harbor Marina, Marina Bay Harbor, Lakewood Yacht Club, Houston Safe Boating Council's W.A.D.E. summer camp goodie bags, Spring Fling Boat Show and Event goodie bags
Pet Waste Signs/Stations	15	Clean Water Partnership marinas (TBD)
		Gulf Coast Yacht Brokers Association members, Christmas Boat Lane Parade on Clear Lake captain goodie bags, Houston Safe Boating Council's W.A.D.E. summer camp goodie bags, Marina Del Sol partnership event, Spring Fling Boat Show and Event goodie bags, all education
Koozies	2500	booths listed in Table 6
T-shirts	140	Clean Water Partnership marina volunteers (Marina Del Sol, future partners)
Dockwalker Totes	44	Volunteers (Marina Del Sol, future partners)



Figure K. BWEC banner displayed at weekly sailboat races on Clear Lake thanks to workgroup member support



Figure L. Storm drain markers were installed at Pelican Rest Marina thanks to workgroup member

In addition to these outreach booths, several group presentations were made throughout the BWEC project period. GBF found that often times more quality interactions resulted from giving these presentations to the boating community due to the fact that it facilitates better discussions and the opportunity to disseminate more detailed information than can be done with a passive booth audience. Please see **Table 6** for a schedule of both types of education events carried out during this grant cycle. One notable presentation given during this project period was to the Galveston County

Workgroup members have also helped with directly promoting the BWEC. For example, a workgroup member that organizes weekly, Wednesday night sailboat races through the Clear Lake Racing Association has donated banner space each week to the BWEC (Figure **K**). Another workgroup member donated storm drain markers to Pelican Rest Marina in Galveston so that GBF could help them meet one of the requirements for the Clean Texas Marina certification (Figure L). Several workgroup members also assisted this marina through the certification site visit and were present when they became the first marina on Galveston Island to be a Clean Texas Marina (Figure M).

GBF staff and volunteers have hosted education exhibits throughout the project area to ensure one-on-one interaction with boaters. Education exhibits take advantage of highly attended boat and fishing shows, and include copies of the printed materials mentioned in **Table 5** (brochures, koozies, and display), a mock-up pump-out station, an opportunity to sign-up to receive more information, and other relevant literature provided by Texas Sea Grant and the Texas Clean Marina Association.



Figure M. Workgroup members assisting with Pelican Rest Marina's Clean Texas Marina certification

Board of Health. A workgroup member from the Galveston County Health District invited GBF

to speak at the board meeting about boater waste issues. The board had a lot of great questions and concerns, those which have been echoed multiple times throughout the past year. The most frequent questions received are 1.) How much is boater waste contributing to the overall bacteria problem in the bay? 2.) How can we get more pump-out stations installed? 3.) Why aren't the boater waste laws being enforced? In the end, the board agreed to partner with GBF on this issue, but ultimately wanted to see more data. As a result, GBF has begun forming a technical advisory committee to strategize how to present existing environmental data and collect statistical data to help quantify the impact of boater waste on bacteria levels in the bay. The board has assigned two environmental investigators to be on the workgroup, which has proven to be a valuable addition.





Figure N. BWEC partners with W.A.D.E. summer program for teens getting boater safety certification

Several workgroup members recommended finding ways to start educating the next generation of boaters at a young age. GBF became a member of the Houston Safe Boating Council, which led to them being invited to be a part of the W.A.D.E. summer program for teens to receive their boater safety certification (Figure N). GBF led a half-hour, handson rotation with the campers and gave a 45 minute presentation that concluded with the teens filling out Clean Boater pledges and signing a letter of support that will be distributed to key people and will be submitted with the future application to the EPA to establish Galveston Bay as a No Discharge Zone. GBF will carry out these activities again during the July W.A.D.E. camp, and this will become an annual tradition.

The final way in which the BWEC progressed this year is in the form of building marina partnerships. The first

Clean Water Partnership to be carried out was with Marina Del Sol and this will serve as a model for future partnerships. GBF worked with the marina managers to determine what their goals for the program were, and to advertise and carry out a launch event for their tenants. The marina donated their clubhouse, supplies and staff to offer a crawfish boil, and a blues band to end the night. GBF provided BWEC campaign items, a festive atmosphere, two hour presentation/interactive Q&A, and raffle prizes for those present for the entire presentation. There were about 35 participants in the launch event and 22 of them filled out pledge cards expressing their commitment to participate in partnership activities. The marina managers recently completed their volunteer water quality monitoring training (part of cycle 16 activities)

and the date for the first Bay Ambassador meeting for the marina is set. This meeting will allow marina staff and tenants to determine a plan of action for carrying out activities to reduce bacteria levels in Clear Lake and Galveston Bay. The agenda will include installing storm drain markers (in-kind donation), planning the launch of their Dockwalker team, and discussing plans for a kid's day camp.

Table 6. Distribution schedule of education events

Date	Event	Location	Representative	Attendance
		MarineMax; Offetts		
8/14/2011	Aquapalooza	Bayou, Galveston	Elizabeth Kompanik	400
	San Leon Sailing		Bob Stokes and Charlene	
8/20/2011	Club talk	Waterford Marina	Bohanon	5
	Oyster Reef			
	Restoration		Charlene Bohanon and	
8/20/2011	Benefit	Last Concert Café	Julie Mintzer	40
	Boy Scout			
	Leaders	House of Prayer		
9/1/2011	Roundtable	Lutheran Church	Charlene Bohanon	20
			Charlene Bohanon, Emily	
			Demmeck, Matthew	
			Singer, Bob Stokes,	
9/4/2011	Redfish Raft-Up	Redfish Island	Sharon Roark	130
	National			
	Geographic			
	Marine			
	Recreation		Bob Stokes and Charlene	
11/2/11	Workshop	Hotel Galvez	Bohanon	150
	Gulf Coast Yacht			
	Brokers	Lakewood Yacht		
11/3/11	Association	Club	Charlene Bohanon	28
	TMDL Public	Armand Bayou		
11/15/11	Meeting	Nature Center	Charlene Bohanon	28
1/7/12 -	Houston Boat			
1/15/12	Show	Reliant Center	GBF staff and volunteers	75,000
	TMDL Public	Armand Bayou		
1/18/12	Meeting	Nature Center	Charlene Bohanon	31
	AP Aquatic	Clear Springs High		
1/31/12	Science Class	School	Charlene Bohanon	25
	Galveston	Galveston County		
	County Board of	Health District		
2/29/12	Health	Building	Charlene Bohanon	28

2/29/12 -	Fishing Shows	George R. Brown		
3/4/12	Limited	Convention Center	GBF staff and volunteers	20,000
	Southwest			
3/22/12 -	International	South Shore Harbor		
3/25/12	Boat Show	Marina	GBF staff and volunteers	15,000
	World Water		Charlene Bohanon, Julie	
3/22/12	Day event	Coffee Oasis	Mintzer, volunteers	50
			Charlene Bohanon and	
3/31/12	Trash Bash	Bay Area Park	Emily Demmeck	700
	Clean Water			
	Partnership		Charlene Bohanon and	
4/14/12	launch event	Marina Del Sol	volunteers	35
	West Marine			
5/3/12	Charity Night	West Marine	Emily Demmeck	100
			Charlene Bohanon, Teresa	
6/9/12	Bay Day	Kemah Boardwalk	Long and volunteers	7,000
6/13/12	W.A.D.E. camp	Clear Lake Park	Charlene Bohanon	50
	GBF Executive			
	Committee	Kirby Marine	Charlene Bohanon and	
6/18/12	Board Meeting	headquarters	Bob Stokes	15
6/20/12 -	Houston Boat			
6/24/12	Show	Reliant Center	GBF staff and volunteers	75,000

GBF has promoted the campaign in boat show event programs; Lone Star Outdoor News, Dock Line Magazine, Change Magazine, Texas Fish & Game Magazine, Texas Lakes and Bays, Bay Area Citizen, Boater's Directory, and the GBF Gazette; on the campaign webpage: www.galvbay.org/education_boaterwaste.html; online articles at Wiredin.cc Talk of the Bay (www.wiredin.cc); as well as posts on Facebook and GBF's website news feed. Some of the ad space was paid for, and some was donated because of the publication's support for the BWEC. Copies of printed ads are included in the section below, and a complete list of our media outlets can be found in **Table 7.**

Table 7. Media outlets contacted about BWEC

Media Outlet	Contact Email Address
39 News	justin@39online.com
713news.com	cyndi@713news.com
ABC News	douglas.p.schurtz@abc.com
	Ktrk.newsalerts@abc.com
	Blanca.e.beltran@abc.com

	_
	Gina.l.larson@abc.com
	Casey.curry@abc.com
	Randy.klein@abc.com
Associated Press	houstaff@ap.org
Bay Area Observer	editor@bayareaobserver.com
Bay Area Print (local neighborhood newspapers)	baprint@sbcglobal.net
Baytown Sun	carla.torres@baytownsun.com
	sunnews@baytownsun.com
Change Magazine	triciag@changemediaonline.com
Citizens' Environmental Coalition	news@cechouston.org
Clear Channel Communication	bryanerickson@clearchannel.com
	rickjanacek@clearchannel.com
Click 2 Houston (KPRC)	hounews@click2houston.com
	lstewart@click2houston.com
Coastal Angler Magazine	susanne@coastalanglermagazine.com
EarthShare of Texas	estx@earthshare-texas.org
FishWestEnd.com	coe@fishwestend.com
Fox TV	John.Dawson@FOXTV.COM;
	dawson@fox26.com
	newsdesk@fox26.com
Galveston County Daily News	angela.taylor@galvnews.com
	stevy.curbow@galvnews.com
	chris@galvnews.com
Houston Chronicle	matthew.tresaugue@chron.com
	Jenny.Montgomery@chron.com
	citydesk@chron.com
	lindsay.wise@chron.com
	dale.lezon@chron.com
	anita.hassan@chron.com
	jason.spencer@chron.com
	mike.glenn@chron.com
Houston Community Newspapers	dbell@hcnonline.com
- • •	jbranch@hcnonline.com
	sthomas@hcnonline.com
	dguthrie@hcnonline.com
	mhellinghausen@hcnonline.com
	mreed@hcnonline.com
Houston Newcomer Guide	info@houstonnewcomerguides.com
Houston Press	rich.connelly@houstonpress.com
HOUSIOH FIESS	Ten.comeny enousionpress.com

Indo American News	indoamericannews@yahoo.com
Katy Times	timesnews@katytimes.com
KHOU Channel 11	assignments@khou.com
	tsnnews@cbs.com
KIAH Channel 39	news@39online.com
KPRC Local 2	storyideas@kprc.com
	desk@kprc.com
	jrizzuti@kprc.com
	ptopham@KPRC.com
	dlevy@kprc.com
KUHF 88.7	news@kuhf.org
Lone Star Outdoor News	mhughs@lonestaroutdoornews.com
MSNBC	sheara.braun@msnbc.com
Pasadena Citizen	pasadenacitizen@hcnonline.com
PBS Houston	sergio@pbshou.com
	hpotts@estuaries.org
Restore America's Estuaries	hwhite@estuaries.org
Southeast Neighbors	Southeastneighbors@yahoo.com
Telemundo	cdepavia@telemundo.com
	dxmorale@telemundo.com
	nxgarcia@telemundo.com
	axsanche@telemundo.com
	ktmd_newsdesk@telemundo.com
Texas Center for Environmental Quality	Ericka.Mccauley@tceq.texas.gov
Texas Fish and Game Magazine	aneves@fishgame.com
Univision	cmardones@univision.net
	smoncivais@univision.net
	univision45@univision.net
Village News Southwest	kballanfant@Village-Southwest-
	News.com
	MyNews@Village-Southwest-News.com
Your Town TV	jennifer_vogel@yourtowntv.com

Advertisements and articles published:

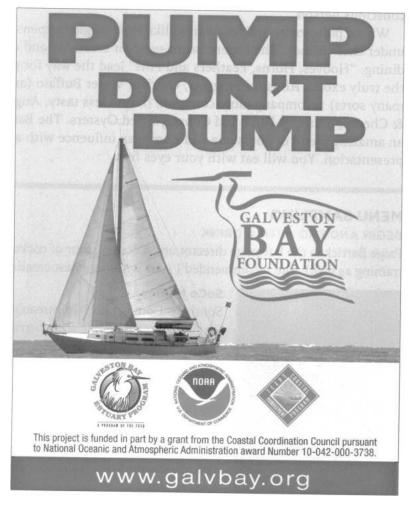
In-kind article space



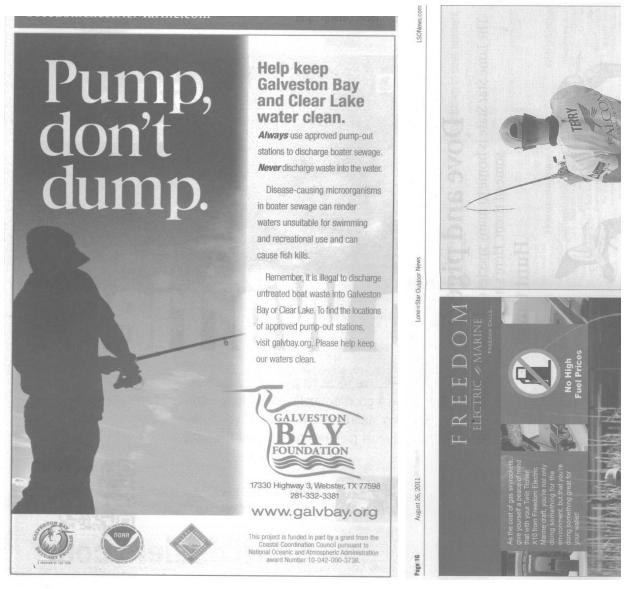




Safe Sunscreen • Healthy Grilling • Summer Staycations • True Anti-Aging Message to Policymakers • Embrace the EV • Live Local Movement • Small Biz Survival your source for inspiration July 2011 Keep America Beautiful



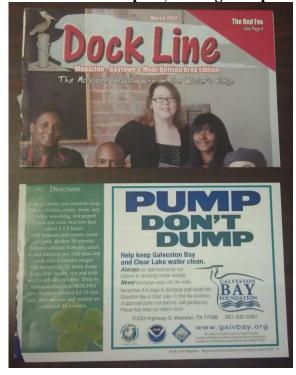
Paid ad aimed at fishing community

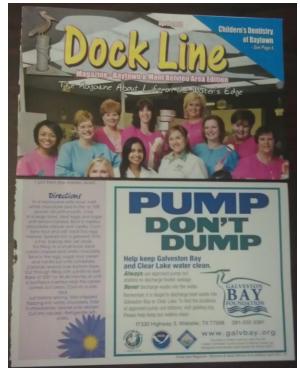


Online and full-page glossy in 2010-2011 issue; 7 in-kind ads of various sizes throughout book

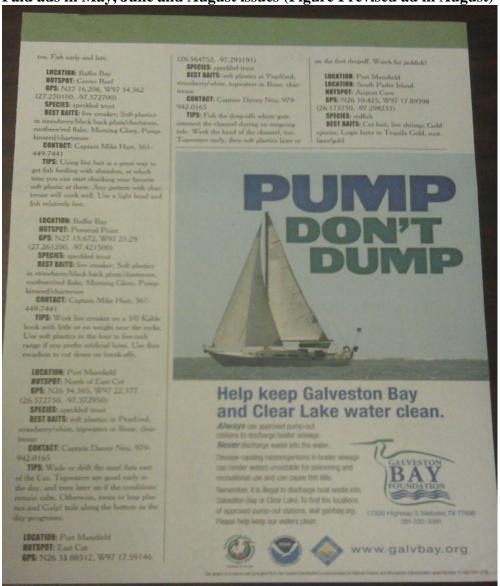


In-Kind donated space, two regional publications



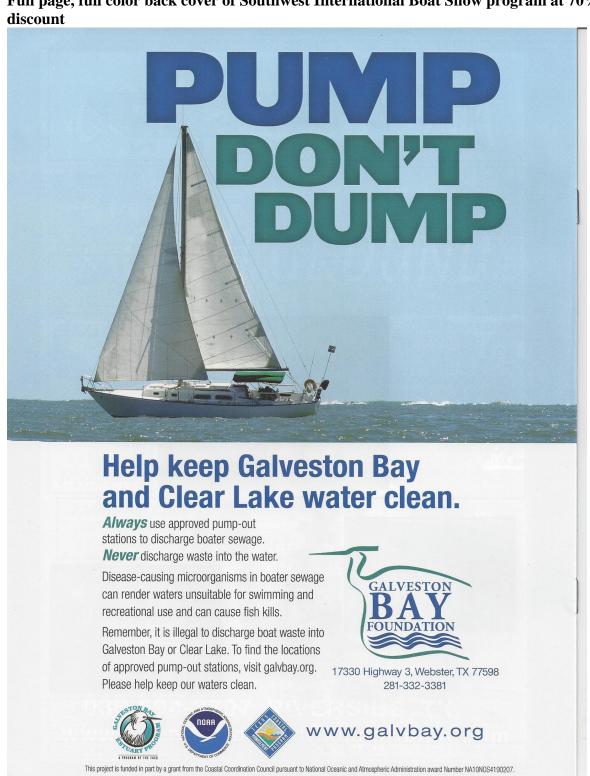


Paid ads in May, June and August issues (Figure I revised ad in August)





Full page, full color back cover of Southwest International Boat Show program at 70%

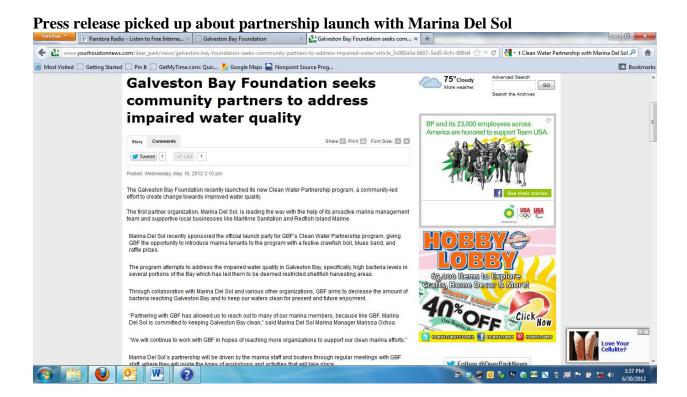


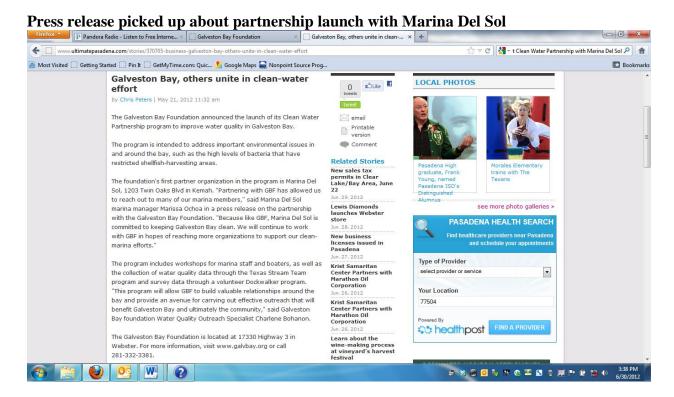
W



has overseen the development and distribution of the message with the advice of a workgroup comprised of, but not limited to, stakeholders from GBEP, TCEQ, Clean Texas Marina Program, Clear Lake Marina Association, and environmental NGOs.

has overseen the





Additional Results, Conclusions, and Lessons Learned

In addition to the marketing and public outreach components of the BWEC carried out in cycle 15, GBF spent time researching and networking in order to try to move forward with efforts to increase enforcement of boater waste laws and increase the number of pump-out stations. The biggest hold up with both of these issues is that it costs the respective parties money and doesn't necessarily bring in profits to cover the costs of carrying out the actions, may not be as important to them as other issues (i.e. safety/homeland security for enforcement agencies; protecting their tenants property from damage for private marinas). With this being said, GBF and the workgroup are frustrated with the lack of progress being made in these areas and want to see this change. GBF has had conversations with many key players over the past several years, but now it is time to make something happen.

Regarding the installation of pump-outs, marinas are not taking advantage of the Clean Vessel Act funds that are available to cover 75% of the cost of purchasing pump-out facilities. There are several workgroup members who are ready and willing to help with the application process, but for the most part this is not being taken advantage of. On a positive note, two new marinas opened during this cycle (Pelican Rest Marina and Bayland Marina) and both either already installed or are in the process of installing pump-out stations. Pelican Rest Marina laid the sewer lines at the same time they installed the fuel lines and are applying for CVA funds with the aid of workgroup members from Maritime Sanitation. Bayland Marina installed a stationary pump-out station and purchased a pump-out cart that are available for public use. However, Clear Lake and

Galveston Bay still sit at less than 50% of marinas having pump-out facilities. Throughout all of the presentations and conversations that GBF held with the boating community during this cycle, there is a unanimous agreement that the boaters want more pump-out facilities, but for some reason this is not translating to the marinas. GBF will continue striving to determine what it will take to get marinas and/or local governments onboard with voluntarily or mandatorily providing the basic sanitation needs of our boating community.

Regarding enforcement activities, the overall holdup remains the lack of funding for agencies to put toward this effort and a lack of education for agents on marina sanitation issues. GBF met with the owner and staff at Maritime Sanitation about strategies for improving the attendance to the training class they developed and are working to get this course accredited for CEU credits through local community colleges. GBF is applying for cycle 18 funding, part of which will go toward funding enforcement events on weekends and holidays in order to see enforcement of boater waste laws come to actuality.

Continued Goals

During the next grant cycle, GBF and the work group will be focusing on expanding the number of marina partnerships formed and getting the boating community involved in hands-on water quality monitoring and projects that will inspire them to change their behavior of illegal dumping of sewage. While it is difficult to quantify the number of bad players in dumping, GBF and the workgroup knows that it is a big issue based on conversations that take place with marina managers and boaters who are passionate about the environment. However, quantifying the impact of boater waste on bacteria levels in the bay may be the most important key to increasing enforcement, installation of pump-out stations, and number of boaters changing their behavior. GBF is forming a technical advisory committee and researching methods of statistical data collection (public records, mobile pump-out records, pump-out station logs, etc.) in order to better quantify boater waste impact.

Further, GBF and the workgroup have discussed the application process for designating Galveston Bay as a No Discharge Zone and will continue to pursue this effort. There are two approaches that can be taken in the application and the one with highest potential for success requires showing evidence of adequate number of pump-out facilities for the number of boats in the bay. The previous discussed data collection will help GBF determine what this number is and how far away we are from meeting it. Aside from this, the other biggest setback is going to be whether or not we can get buy-in from the commercial boating community for a No Discharge Zone. This will cause them economic impacts from the need to install holding tanks on their vessels. GBF is beginning to hold conversations with this audience in order to assess how big of an impact this will be and what can be done to gain their support for the designation.

The BWEC is a complex balance of education and advocacy efforts and GBF looks forward to continuing work on this project. Thank you to the Coastal Management Program and NOAA for your ongoing support of this important environmental, economic, and public health issue.